

# Nico D'Cotta

## Backend Software Engineer

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### EXPERIENCE

06/2020 – today  
part-time,  
then Staff Engineer,  
then Senior Engineer

#### Senior Software Engineer, at Blockchain.com

Large crypto finance house (including a wallet and an exchange) with retail and institutional businesses. Owner of several **JVM** (mainly **Kotlin**) real-time financial services critical for business operation and central to user experience, reporting, and auditing; like ledger-keeping/accounting and indicative pricing. Designing and scaling up **stateful distributed** systems with an event-driven architecture. Reviewing systems' architecture designs and software development methods to cultivate **sustainable engineering practices** and achieve **operational excellence** within the wider company. Implementing application **performance monitoring** and performing **production incident response**.

06/2019 –  
10/2019  
intern

#### Software Engineer, at Emit, Inc.

Four-person startup with its own smartwatch aiming to provide time-analytics to institutional customers. Worked on data analytics, developing real-time data processing pipelines and libraries in **Kotlin** and **Python** on top of serverless tech on **AWS (Lambda, DynamoDB, ElasticSearch)**.

### EDUCATION

2018 – 2022

#### MEng Computer Science – First Class Honours, at Imperial College London

Focus on Software Engineering, Distributed Systems, Network and Computer Security, Systems and Data Scalability, Logic-based AI, Type Systems for Programming Languages, Simulation & Modelling. Additional Business School modules include Project Management, Finance & Financial Markets, and Business Strategy.

2015-2018

#### French Baccalaureate (S-SI) – Highest Honours, at French Lycée of Madrid

High-school diploma with **Engineering Sciences with Further Maths** specialisations, and completed optional Portuguese and Music modules. Extracurriculars include two Model UNs, Drama, Choir, student representative, competing in the basketball team.

### PROJECTS

see my full portfolio at [nico.dcotta.eu](https://nico.dcotta.eu)

AWS (Lambda, DynamoDB, EC2), Kotlin, VueJS

#### DJStreamr, collaborative streaming service for DJs

[djstreamr.com](https://djstreamr.com)

Music synchronisation protocol implemented as a webapp with an event-driven platform architecture which leverages serverless technology.

Elixir, Paxos

#### Multi-Paxos

[cottand/multi-paxos](https://cottand/multi-paxos)

Implementation of a variation of the Paxos consensus algorithm, as specified in the paper *Paxos Made Moderately Complex*.

Kotlin, JVM bytecode, ARM11 assembly

#### WACC, multiplatform compiler

[cottand/WACC](https://cottand/WACC)

Multiplatform compiler from WACC (a toy language) to JVM bytecode and ARM11 64-byte assembly that supports basic constructs like stack-allocated primitives, and heap-allocated arrays and pairs.

C, x86 assembly

#### PintOS, UNIX-like OS

[pintos-os.org](https://pintos-os.org)

Pint-sized OS with features such as advanced scheduling, paging, virtual memory and user programs with support for some of the C stdlib.

### TECHNOLOGIES

**Proficient in** JVM (Kotlin, Java), Gradle

**Experience with** Python, C, Haskell, Typescript, Elixir

Nomad, AWS (Lambda, DynamoDB EC2, S3, CodeDeploy, API Gateway)

gRPC + protobufs, Kafka, Akka, PostgreSQL, Docker, APM, ConcourseCI, TravisCI, GitlabCI, React, VueJS

Object-oriented, Functional, Actor-oriented, and Procedural programming.

### HOBBIES

I enjoy DJing as well as kitesurfing and rock climbing!

### LANGUAGES

**English** - bilingual (C2 certification)

**Spanish** - native

**French** - bilingual

**Portuguese** - advanced level

### SKILLS + FEEDBACK

"Cool under pressure"

"Pleasant to work with"

"Owns solutions and sees them through"

"Aware of product quality"

"Knows which battles to pick"

I can google well!